REMARKS

Applicant respectfully requests reconsideration of this application. Claims 1, 2, 4-8, 10-14, and 16-18 are pending. Claims 1, 7, 10, and 13 have been amended. Claims 19-21 have been added. No claims have been cancelled.

Therefore, claims 1, 2, 4-8, 10-14, and 16-21 are now presented for examination.

Claim Rejection under 35 U.S.C. §112

The Examiner rejected claims 7-8 and 10-12 under 35 U.S.C. 112, first paragraph, based on the use of the term "tangible machine readable medium".

Without any concession regarding the subject matter of the rejection, claim 7 has been amended to refer to a computer-readable medium.

It is submitted that the amendment fully responds to the rejection.

Claim Rejection under 35 U.S.C. §101

The Examiner rejected claims 1-2, 4-8, 10-14 and 16-18 under 35 U.S.C. 101 as being directed to non-statutory subject matter, finding that data structures not claimed as embodied in computer readable media are descriptive material per se and are not statutory because they are not capable of causing functional change in a computer. Further, the Office Action indicates that a useful, concrete and tangible result is not produced.

Without any concession regarding the subject matter of the rejections, the Applicant has amended claim 7 to refer to a computer-readable medium, as provided above. Claim 1 has been amended to refer to computer documents stored on a computer-readable medium.

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In addition, claim 7 has been amended to provide for outputting the summary, which demonstrates the useful, concrete, and tangible result of the process. Similar modifications have been made to claims 1 and 13.

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Claim Rejection under 35 U.S.C. §103

McKeown et al. in view of Salton et al

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The Examiner rejected claims 1 and 5-6 under 35 U.S.C. 103(a) as being unpatentable over "Towards Multidocument Summarization by Reformulation: Progress and Prospects, 1999" of McKeown, et al. ("*McKeown -1*") in view of "Automatic Text Structuring and Summarization, 1997" of Salton et al. ("*Salton*").

Claim 1, as amended herein, provides as follows:

1. A computer-implemented method comprising:

   parsing a plurality of paragraphs in a plurality of computer documents stored on a computer-readable medium, each document with one or more of the paragraphs;

   selecting paragraphs from the documents through a subsuming relation calculation including,

     creating a link from terms in each paragraph to identical terms in substantially all of the other paragraphs, wherein terms include noun phrases, verb phrases or entity names,

     counting for each paragraph the number of links from the terms in the paragraph to the terms in other paragraphs,

     denoting for each paragraph the number of links counted for that paragraph as the significant score of that paragraph,

     ranking the paragraphs by the significant score,

selecting paragraphs based on the ranking, wherein paragraphs in the ranking that subsume the highest number of other paragraphs are selected prior to the other paragraphs in the ranking;

aggregating the selected paragraphs into a summary; and

outputting the summary.

Claim 1 thus includes "selecting paragraphs based on the ranking, wherein paragraphs in the ranking that subsume the highest number of other paragraphs are selected prior to the other paragraphs in the ranking". It is submitted that the selection of paragraphs that subsume the largest number of other paragraphs provides a different and significant result in comparison to simply basing a summary on ranking of link counts It is submitted that, in addition to other differences, the cited references do not provide selection of paragraphs that subsume the highest number of other paragraphs.

The Office Action recognized that *McKeown -1* does not teach counting created links for paragraph selection and aggregation for creating a summary, finding that such summary formation techniques are well known in text processing, as evidenced by *Salton*. However, it is respectfully submitted that *Salton* does not address the usage of subsumed paragraphs in the selection of paragraphs for aggregation into a summary.

Salton addresses text summarization, indicating that:

A text summary can be generated by selectively extracting important paragraphs from the text. This could be accomplished by automatically identifying the important paragraphs on a text relationship map and traversing the selected nodes in text order to construct an extract, or *path*. In dealing with text traversal, it is necessary to distinguish the so-called global paths that operate on a complete text from paths restricted

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to some substructure, such as paths within a segment. In either case, many different traversal orders can be considered, the most important being the following.

(*Salton*, p. 198, §3)   Within this general concept of traversing nodes in a path, *Salton* identifies the consideration of the "bushiness" of a node, this being the number of links of the node:

> The *bushiness* of a node on a map is defined as the number of links connecting it to other nodes on the map. Since a highly bushy node is linked to a number of other nodes, it has an overlapping vocabulary with several paragraphs and is likely to discuss topics covered in many other paragraphs. Such paragraphs are desirable in a summary, and are good candidates for extraction. When paragraphs that are linked to other paragraphs of the article are extracted, the summaries are quite comprehensive, i.e. the coverage of the subject matter of the article is good. A global bushy path is constructed out of the *n* most bushy nodes on the map, wherein *n* is the targeted number of paragraphs in a summary. These nodes are arranged in chronological order, i.e. the order in which they appear in the original document, to form the summary.

(*Salton*, p. 198, §3.1) (emphasis added)   Thus, *Salton* provides that a summary in this manner is based on the path which is constructed of the "bushiest" nodes, the nodes containing the highest number of links to other nodes. In addition to any other differences, the reference does not address that concept of a paragraph or node that subsumes another paragraph or node, or that paragraphs that subsume the largest numbers of other paragraphs will be chosen ahead of other paragraphs.

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Thus, neither of the references addresses the subsuming relation process. Claim 1 provides an element that will modify the summary using relationships that are not recognized by either reference.

The remaining rejected claims are dependent claims, and are allowable as being dependent on the allowable base claim.

Claim Rejection under 35 U.S.C. §103

McKeown-1 et al. in view of Salton et al. in view of McKeown-2 et al. and further view of Ueda

The Examiner rejected claim 2 under 35 U.S.C. 103(a) as being unpatentable over *McKeown-1* in view of *Salton*, in view of U.S. Patent 6,473,730 of McKeown et al., (*"McKeown-2"*) and in further view of U.S. Patent 6,493,663 of Ueda (*"Ueda"*).

The rejected claim is a dependent claim, and is allowable as being dependent on the allowable base claim.

In addition, it is submitted that *McKeown-2* and *Ueda* do not contain the claim elements shown to be missing from *McKeown-1* and *Salton* and thus the references, taken in any combination, do not teach or reasonably suggest the elements of the claims. There does not appear to be any discussion in *McKeown-2* and *Ueda* that is relevant to the subsuming of a first paragraph by a second paragraph, or to the basing of paragraph selection on the paragraphs that subsume the greatest number of other paragraphs.

Claim Rejection under 35 U.S.C. §103

McKeown-1 et al. in view of Salton et al. in further view of McKeown-2 et al.

The Examiner rejected claim 4 under 35 U.S.C. 103(a) as being unpatentable over *McKeown-1* in view of *Salton*, in further view of *McKeown-2*.

The rejected claim is a dependent claim, and is allowable as being dependent on the allowable base claim.

It is again submitted that *McKeown-2* does not contain the claim elements shown to be missing from *McKeown-1* and *Salton* and thus the references, taken in any combination, do not teach or reasonably suggest the elements of the claims.

Claim Rejection under 35 U.S.C. §103

McKeown-1 et al. in view of Salton et al. in further view of Ueda

The Examiner rejected claims 7, 11-13 and 17-18 under 35 U.S.C. 103(a) as being unpatentable over *McKeown-1* in view of *Salton*, in further view of *Ueda*.

It is submitted that the above arguments with regard to *McKeown-1* and *Salton* for claim 1 also apply to independent claims 7 and 13, and thus such claims are also patentable over such references. It is again submitted that *Ueda* does not contain the claim elements shown to be missing from *McKeown-1* and of *Salton* and thus the reference, taken in any combination, do not teach or reasonably suggest the elements of the claims.

The remaining rejected claims are dependent claims, and are allowable as being dependent on the allowable base claims.

Claim Rejection under 35 U.S.C. §103

McKeown-1 et al. in view of Salton et al. in view of Ueda in further view of

McKeown-2

The Examiner rejected claims 8, 10, 14 and 16 under 35 U.S.C. 103(a) as being unpatentable over *McKeown-1* in view of *Salton*, in view of *Ueda* and in further view of *McKeown-2*.

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The rejected claims are dependent claims, and are allowable as being dependent on the allowable base claims.

Conclusion

Applicant respectfully submits that the rejections have been overcome by the amendment and remark, and that the claims as amended are now in condition for allowance. Accordingly, Applicant respectfully requests the rejections be withdrawn and the claims as amended be allowed.

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Invitation for a Telephone Interview

The Examiner is requested to call the undersigned at (503) 439-8778 if there remains any issue with allowance of the case.

Request for an Extension of Time

The Applicant respectfully petitions for an extension of time to respond to the outstanding Office Action should one be necessary. Please charge any required fee to our Deposit Account No. 02-2666.
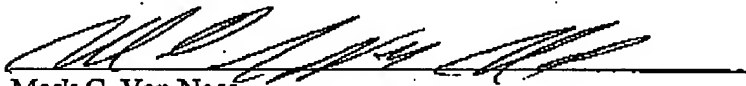
Charge our Deposit Account

Please charge any shortage to our Deposit Account No. 02-2666.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Date: 9/5/07

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